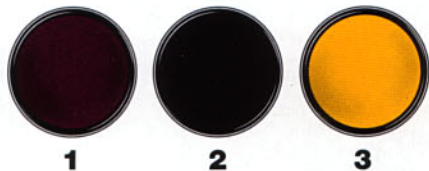


B+W Filters for Infrared Film

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1 B+W 092 (89B)

This dark red filter is for black and white infrared films and filters out light below approximately 650 nm. It allows pictures of a pure red image while making good use of the relatively low sensitivity of infrared films. Filter factor is approx. 20 – 40.

2 B+W 093 (87C)

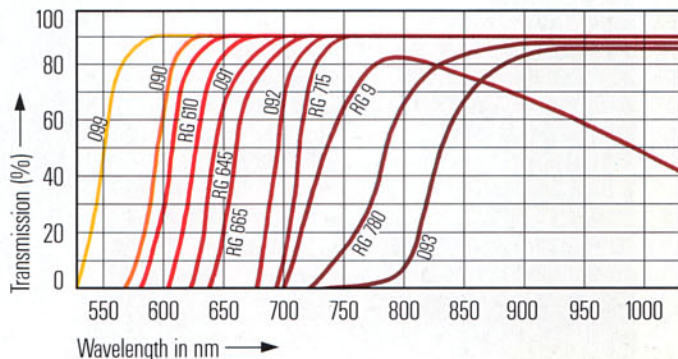
This black infrared filter will filter out the entire visible spectrum. It is used with black and white infrared films with a sensitivity up to 1000 nm. Filter factor is determined by the film sensitivity.

3 B+W 099

This orange colored filter blocks the blue and blue-green portion of the visible spectrum up to approximately 520 nm. It reduces the excessive sensitivity of color infrared films for this spectral range, helps avoid a blue tint and differentiates colors more evenly. Filter factor depends upon the film sensitivity.

The following Schott glass types for infrared material are available on request: OG 590, RG 610, RG 630, RG 645, RG 665, RG 715, RG 780 and RG 9. The transmission curves for these glass types are illustrated below.

The specifications in brackets indicate the comparable KODAK Wratten filters.



The spectral range above 780 nm is not visible to the human eye. Nevertheless, there is a guideline for special, infrared sensitive film. The sensitization of black and white infrared film goes to approximately 900 nm. Some infrared images are possible that consist of a combination of visible and infrared light. For purely infrared images, radiation below approximately 780 nm must be completely filtered out.

See pages 47 – 49 for available sizes and models.

Tips

In general, the sensitivity of black and white infrared film is about ISO 50/18-degrees. Kodak infrared film and the B+W filter # 092 is about ISO 20/14-degrees; with the B+W filter # 093 about ISO 10/11-degrees. However, these values are highly dependent on the strength of the infrared radiation present in the scene which is much higher when the sun is low than at any other sun angles. It is advisable to first test a film and filter combination. Lens designs are normally calculated for the visible spectrum. Focusing problems will occur as one attempts to photograph in infrared. The result will be out of focus photographs. Focusing scales of high-quality lenses have an infrared index (a red dot next to the focus markings) to which the focus is set for infrared photography. The impressive special "wood-effect" (very bright to white reproduction of chlorophyll in black and white positive images) appears the strongest at low sun angles. Under such conditions, a strong red filter plus normal black and white film is sufficient. Infrared pictures without filters always produce unsatisfactory results similar to black and white pictures missing tonal value gradation and color pictures showing a strong blue-green tint and little color differentiation.